



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 7  
25 FUNSTON ROAD  
KANSAS CITY, KANSAS 66115

OCT 16 1984

MEMORANDUM

SUBJECT: RCRA Compliance Evaluation Inspection at GM Leeds, Kansas City, Missouri; Follow-up to a Citizen Complaint (A043)

FROM: *John W. Bosky*  
John W. Bosky  
Environmental Engineer, EMCM/ENSV

TO: David Doyle  
Environmental Engineer, AWCM/ARWM

THRU: Robert B. Dona *RBDona*  
Chief, Field Investigations Section, EMCM/ENSV

INSPECTION PARTICIPANTS

General Motors Assembly Division-Leeds Plant (GM):  
Jerome E. Daniels, P.E., Director-Plant Engineering  
Larry N. Pemberton, Environmental Engineer  
Jack Still, Supervisor-Maintenance

Missouri Department of Natural Resources (MDNR):  
Steven Johnson, Environmental Specialist, Kansas City Regional Office

U.S. Environmental Protection Agency (EPA):  
John W. Bosky, Environmental Engineer

BACKGROUND INFORMATION

On August 9, 1984, the EPA received a citizen complaint that the General Motors Assembly Division-Leeds Plant in Kansas City, Missouri, was improperly disposing of a hazardous waste (paint sludge) into the Municipal sewer collection system. The caller indicated that this improper disposal was an on-going activity and would be discovered if the facility was investigated immediately.

INSPECTION SUMMARY

On August 9, 1984, I conducted a RCRA compliance evaluation inspection at the General Motors Assembly Division-Leeds Plant in Kansas City, Missouri. This inspection was conducted to follow up on an allegation that a hazardous waste was being improperly disposed of by discharge into the Municipal sewer collection system. The following summarizes the findings of this inspection:



R00161445  
RCRA RECORDS CENTER

RECEIVED

OCT 17 1984

WASTE CO.  
BRANCH

BRANCH  
OCT 12 1900  
RECEIVED  
Cc: Morley  
State  
Doyle  
10/10/00

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1. On August 9, 1984, at approximately 3:00 p.m. I arrived at the GM-Leeds Plant and contacted Larry N. Pemberton, the facility representative regarding hazardous waste management. At this time, I informed Mr. Pemberton of the purpose of the investigation. We then met with Mr. Jerome E. Daniels, Director-Plant Engineering, and discussed GM's paint sludge disposal procedures. After this discussion, we conducted a visual inspection of a paint sludge storage tank that was in the process of being cleaned.

2. The GM-Leeds Plant operates 5 spray painting booths. One is used for applying a primer and the other four are used for applying a color top-coat to the cars. All five booths use recirculating water curtain systems to clean paint overspray from the exhaust draft. Paint sludge is removed from the recirculated water in one of two tanks (one tank for primer booth, one tank for color booths). A polymer is added to the recirculating water flowing into each tank and the paint solids settle to the bottom of the tank. The treated water is then pumped back to the water curtain systems. The two tanks are large, rectangular open-top metal units with a removable side door (to allow for easier sludge removal) and a valved bottom drain which flows to GM's industrial wastewater collection system. These drains are kept closed while the water curtain systems are in use.

3. Facility representatives stated that the sludge accumulation tanks for the water curtain systems are cleaned around every two weeks on alternating weekends. Facility representatives summarized the tank cleaning procedures as follows:

a. Tank usage is discontinued and all paint solids are allowed to fully settle.

b. The bottom drain valve is cracked open and the water layer above the sludge is allowed to slowly drain.

c. Maintenance personnel remove the sludge from the tank using shovels. Sludge is shoveled through the opening in the side of the tank into a small cart. When full, this cart is taken to a waiting sludge box and emptied. This procedure continues until all of the solids have been removed from the tank. The tank system is then placed back into operation.

Facility representatives estimated that 2 to 4 21-cubic yard sludge boxes of paint sludges are generated monthly. It should be noted that any material drained from the sludge accumulation tanks will flow to the Municipal sewer collection system.

4. During the discussion of paint sludge handling procedures, facility representatives stated that the paint sludges generated at GM-Leeds have been analyzed and were found to be non-hazardous. These analytical results are included as Attachment I. In addition, although the paint sludges are not classified as hazardous waste, they are cur-



rently being disposed of at the U.S. PCI facility in Oklahoma, an approved hazardous waste landfill. Waste shipment logs for wastes generated at the GM-Leeds Plant are included as Attachment II. These logs indicate that paint sludge shipments have been consistent over the past year.

5. After initial discussions with facility representatives, I conducted a visual inspection of a sludge accumulation tank that was in the process of being cleaned. At this time, I observed 6 or 7 maintenance workers inside of a large metal tank. These men were shoveling a sludge-like material into a cart through an opening in the side of the tank. In addition to the sludge piled inside of the tank, I observed that the floor of the tank was covered with a thin layer of a milky appearing liquid. I next asked for, and received approval, to interview several of the workers who were cleaning the tank. The following maintenance workers were interviewed:

- Jack Hazelrigg
- James Garner
- Ron Durnell
- Clyde Coump

Discussions with these individuals yielded the following consensus regarding sludge tank clean out practices:

a. Prior to any sludge clean out, the water layer is drained from the tank. No wastes are drained from the tank except when it is being cleaned.

b. After the water layer is drained, maintenance workers enter the tank and shovel out the remaining paint solids.

c. Toward the end of the cleaning operation, all residue remaining on the floor of the tank is pushed to one side of the tank and any free liquid with the residue is allowed to gravity flow to the drain.

d. The maintenance workers then remove as much of the remaining residue as possible. Next, they push (with squeegees) all liquid and light solids remaining on the floor of the tank to the tank drain.

e. The maintenance workers were uniform in their statements that they felt that as much of the paint solids as possible was shoveled out of the tank, and that the only wastes that are drained are the water layer above the sludge level initially and a thin layer of liquid and residue that cannot be shoveled out.

6. Currently, any material drained from the paint sludge accumulation tanks is discharged to the Municipal wastewater collection system. GM-Leeds is in the process of constructing a wastewater pre-treatment facility. When finished, all wastes discharged from the paint sludge accumulation tanks will be treated at this facility.



7. During the interview with Ron Durnell, he stated that he had observed waste paint being mixed into the sludge box used for the paint sludge. This was confirmed by Jack Still and James Garner, who stated that around 30 to 40 gallons of a hardened paint was placed into the sludge box used for paint sludges. Larry Pemberton confirmed that waste paint from the plant would be classified as an ignitable waste, but also stated that since the paint was hardened, it would be difficult to classify it as hazardous or non-hazardous without testing. The hardened paint had not been tested prior to disposal. It should again be noted that although the paint sludges have been classified as non-hazardous, they are disposed of at an approved hazardous waste landfill.

### CONCLUSIONS

The citizen complaint regarding improper hazardous waste disposal by GM-Leeds seems to be based on the disposal of two wastestreams during the routine cleaning of the paint sludge accumulation tanks.

1. Initial water layer above the paint sludge.
2. Any liquid and light solids remaining on the floor of the tanks after paint solids have been shoveled out.

Since the paint sludges have been tested and found to be non-hazardous, and because the facility attempts to recover as much of the paint sludges as possible, there does not appear to be any improper disposal of paint sludges by GM-Leeds. However, the discharge of wastes during tank cleaning could adversely impact any Municipal limitations placed on the plant's industrial wastewater discharge.

### Attachments:

- I - Paint Sludge Analyses (5 pages)
- II - Waste Shipment Logs (6 pages)

ATTACHMENT I.



# Aztec Laboratories

3931 ARLINGTON  
KANSAS CITY, MISSOURI 64133  
816 356-0926 (358-1131)

November 26, 1982

Mr. Larry Pemberton  
Plant Engineering  
GM Assembly Division  
6817 Stadium Drive  
Kansas City, MO 64129

Dear Sir:

Our analysis of the sample acquired on 11-17-82 has been completed pursuant to your order #LE 103186. Results are appended.

Sincerely,

Merrill E. Nissen, director  
AZTEC Laboratories

Note: The materials referred to above is a sample from GMAD Leeds Plant;  
"Prime Paint Sludge"



# Aztec Laboratories

3931 ARLINGTON  
KANSAS CITY, MISSOURI 64133  
816 358 1131

May 31, 1980

Mr. Larry Pemberton  
Plant Engineering  
GM Assembly Division  
6817 Stadium Drive  
Kansas City, Mo. 64129

Re.: Waste Classification of Color Paint Sludge

Dear Sir:

- A. Department of Natural Resources Hazard Class: Listed( Acrylic)
- B. Major Components of Waste: Resin- *ACRYLIC DISPERSION POLYMERS*.  
Extract level by Toxic Extraction Procedure

Arsenic:	LT	0.5
Barium:	LT	10
Cadmium:	LT	0.01
Chromium:	LT	0.1
Lead:	LT	0.1
Mercury:	LT	0.001
Selenium:	LT	0.1
Silver:	LT	0.01

Chlorinated Pesticides: not applicable

C. Physical Data:

- 1. Solubility in water: 0.0136 g/100 ml @ 20°C
- 2. Specific gravity: 1.11
- 3. Vapor Density: not applicable
- 4a. Appearance: grey sludge
- 4b. Odor: paint solvent
- 5. Physical Data: sludge
- 6. Weight % volatiles @ 100°C--54.6
- 7. Weight % volatiles @ 600°C--88.7
- 8. Boiling Point °C: not applicable
- 9. pH: 5.7

D. % Moisture: 53%



(GM Assembly Division, Leeds Plant, waste analyzed is "Prime Paint Sludge")

## WASTE MATERIAL EVALUATION INFORMATION

### I. Physical Chemical Properties

- A. Physical State: Semi-solid
- B. Flash Point: not determinable
- C. Vapor Pressure: ca 100 mm Hg
- D. Specific Gravity: 50.57 lb./cu. ft.
- E. Odor: Slight odor of mineral spirits
- F. Solids: 1)TS--68.0% by wt. 2)TDS--N/A 3)TSS--N/A
- G. Type: Inorganic/Organic Mixture
- H. pH/Normality: N/A
- I. Weight % volatiles @ 100 C: 32.0
- J. Weight % volatiles @ 600 C: 44.6

### II. Inorganic Components

#### A. Metals: (ppm)

##### EP Extractable

Ag	lt 0.05
As	lt 0.5
Ba	lt10
Cd	lt 0.01
Cr	lt 0.1
Cu	lt 0.05
Hg	lt 0.001
Ni	lt 0.05
Pb	0.77
Se	lt 0.5
Zn	0.08

### III. Incineration Properties

- A. BTU: 2160 BTU/lb.
- B. Ash: 55.4%
- C. Halogen:0.02%
- D. Sulfur: 0.37%
- E. Mercury: lt 0.005 ppm
- F. Lead: lt 0.1 ppm

### IV. EPA Waste Classification: Non-hazardous

lt=less than



# Aztec Laboratories

201 ARKINGTON  
KANSAS CITY, MISSOURI 64123  
913-831-1141

February 20, 1981

Mr. Larry Pemberton  
Plant Engineering  
GM Assembly Division  
6817 Stadium Drive  
Kansas City, Mo. 64129

Re.: 40CFR261. hazard classification of process wastes

Dear Sir:

Following are the results of our analysis of the several process waste samples received on 2/4/81. None of the wastes were expected to be found hazardous as ignitable (40CFR 261.21) or reactive (40CFR 261.23). Tests were conducted to determine corrosivity and toxicity.

Parameter	Prime	Color	Blue Surf	Bonderite	Chrome	Caustic
Arsenic	1t0.5	1t0.5	1t0.5	1t 0.5	1t 0.5	1t 0.5
Barium	1t 10	1t 10	1t 10	1t 10	1t 10	1t 10
Cadmium	1t0.01	1t0.01	1t0.01	0.04	0.02	0.04
Chromium	1.8	0.07	0.04	0.07	1.2	0.04
Lead	0.05	0.94	1.2	0.06	1t 0.05	0.05
Mercury	1t0.001	1t0.001	1t0.001	1t0.001	1t0.001	1t0.001
Selenium	1t 0.1	1t 0.1	1t0.1	1t 0.1	1t 0.1	1t 0.1
Silver	1t0.001	1t0.001	1t0.001	1t0.001	1t0.001	1t0.001
pH	N/A	N/A	N/A	3.8	N/A	13.1

40 CFR 261.24 indicates that none of the wastes are to be classed as hazardous by toxicity, however by 40 CFR 261.22 the caustic sludge should be classed as corrosive and hazardous. That waste stream is the only one which should be classed in the general hazard classifications. It is possible that listed processes or components may require others to be classed as hazardous.

We appreciate this opportunity to be of service.

Sincerely

Merrill E. Nissen, director  
AZTEC Laboratories

E. Flash Point: not applicable

F. Reactivity: none

We appreciate this opportunity to be of service.

Sincerely,

*Merrill E. Nissen*

Merrill E. Nissen, Director

MEN/dv





HAZARDOUS WASTES SHIPMENTS - MANIFEST CONTROL LOG											
SHIPMENT CONTROL NUMBER		WASTE IDENTIFICATION & IDENTIFICATION NUMBER			WHERE SHIPPED			QUANTITY		REMARKS	
250		6/6/84	PAINT Sludge		U.S. Pollution Control			21cu Yd		151023✓	
251		6/7/84	Bowditch Sludge 700 Drums Waste Series 12 Drums		U.S. Pollution Control			82 Drums		151089✓	
252		6/7/84	PAINT Sludge		U.S. Pollution Control			21cu Yd.		151024✓	
253		6/14/84	WASTE SOLVENT		SOLVENT RECOVERY			7000 GALS		151158✓	
254		6/24/84	PAINT Sludge		U.S. Pollution Control			21cu Yd.		151316✓	
255		6/27/84	PAINT Sludge		U.S. Pollution Control			21cu Yd.		151317✓	

HAZARDOUS WASTES SHIPMENTS - MANIFEST CONTROL LOG							
SHIPMENT CONTROL NUMBER	WASTE IDENTIFICATION & IDENTIFICATION NUMBER	WHERE SHIPPED	QUANTITY	REMARKS			
230	4/1/84 Waste Solvent	Solvent Recovery	APPROX. 7000 GAL	149985 ✓			
231	4/6/84 Paint Sludge	U.S. Pollution Control	21 Cu. Yd.	149886 ✓			
232	4/9/84 Paint Sludge	U.S. Pollution Control	21 Cu. Yd.	149974 ✓			
233	4/10/84 Paint Sludge	U.S. Pollution Control	21 Cu. Yd.	149975 ✓			
234	4/12/84 Paint Sludge	U.S. Pollution Control	21 Cu. Yd.	149976 ✓			
235	4-18-84 Border to Ship 100 Caustic Sludge 18 Waste Solvent 4	U.S. Pollution Control	82 Drums	150080 ✓			
236	4/23/84 Waste Solvent	Solvent Recovery	7000 GAL	150199 ✓			
237	4/17/84 Paint Sludge	U.S. Pollution Control	21 Cu. Yd.	150156 ✓			
238	4/24/84 Waste Solvent	Solvent Recovery	APPROX. 3500 GAL	149331 ✓			
239	5/3/84 Waste Solvent	Solvent Recovery	APPROX. 7,000 GAL	150406 ✓			
240	5/4/84 PAINT Sludge	U.S. Pollution Control	21 Cu. Yd.	150441 ✓			
241	5/9/84 Paint Sludge	U.S. Pollution Control	21 Cu. Yd.	150536 ✓			
242	5/11/84 Paint Sludge	U.S. Pollution Control	21 Cu. Yd.	150537 ✓			
243	5/10/84 Paint Sludge	U.S. Pollution Control	21 Cu. Yd.	150538 ✓			
244	5/17/84 Paint Sludge	U.S. Pollution Control	21 Cu. Yd.	150703 ✓			
245	5/25/84 Waste Solvent	Solvent Recovery	APPROX. 7000 GAL	150787 ✓			
246	5/25/84 Waste Solvent	Solvent Recovery	APPROX. 3000 GAL	150730 ✓			
247	5/25/84 Waste Paint	Solvent Recovery	14-55 gal Drums	150802 ✓			
248	5/31/84 PAINT Sludge	U.S. Pollution Control	21 Cu. Yd.	150961 ✓			
249	6/5/84 PAINT Sludge	U.S. Pollution Control	21 Cu. Yd.	151022 ✓			





HAZARDOUS WASTES SHIPMENTS - MANIFEST CONTROL LOG						
SHIPMENT CONTROL NUMBER	WASTE IDENTIFICATION & IDENTIFICATION NUMBER	WHERE SHIPPED	QUANTITY	REMARKS		
208	1/5/84 Waste Solvent	✓ Mobay Chem. Co.	7543 Gal	147777	✓	
209	1/10/84 Paint Sludge	U.S. Pollution Control	21 Cu. Yd.	148075	✓	
210	1/13/84 Waste Solvent	Solvent Recovery	1900 Gal	148130	✓	
211	1/13/84 Waste Solvent	✓ Mobay Chem. Co.	7350 Gal	147823	✓	
212	1/23/84 Paint Sludge	U.S. Pollution Control	21 Cu. Yd.	148373	✓	
213	1/24/84 Paint Sludge	U.S. Pollution Control	21 Cu. Yd.	148372	✓	
214	1/24/84 Paint Sludge	U.S. Pollution Control	21 Cu. Yd.	148075	✓	
215	1/26/84 Bonderite Sludge 79 Waste Sealer 5	U.S. Pollution Control	79 Drums 5 Drums	148427	✓	
216	2/8/84 Waste Solvent	Solvent Recovery	2000 Gal	148674	✓	
217	2/9/84 Waste Solvent	Solvent Recovery	13,400 Gal	148776	✓	
218	2/14/84 Waste Paint	Solvent Recovery	20 Drums	148836	✓	
219	2/17/84 Waste Solvent	Solvent Recovery	2000 Gals.		✓	
220	2/20/84 Waste Solvent	Solvent Recovery	7200 Gal.	148758	✓	
221	2/28/84 Paint Sludge	U.S. Pollution Control	21 Cu. Yd.	148374	✓	
222	2/28/84 Paint Sludge	U.S. Pollution Control	21 Cu. Yd.	149101	✓	
223	2/28/84 Paint Sludge	U.S. Pollution Control	21 Cu. Yd.	149102	✓	
224	3/7/84 Waste Solvent	Solvent Recovery	7100 Gal	149273	✓	
225	3/6/84 Waste Solvent	Solvent Recovery	2000 Gal	149224	✓	
226	3/14/84 Waste Solvent	Solvent Recovery	2000 Gal	149287	✓	
227	3/13/84 Bonderite Sludge Waste Sealer	U.S. Pollution Control	62 Drums 22 Drums	149335	✓	

## HAZARDOUS WASTES SHIPMENTS - MANIFEST CONTROL LOG

[illegible]